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ABSTRACT

This paper summarizes results of followup-surveys of 1994, 1991, 1988, and 1984 graduates of Illinois public universities to determine whether baccalaureate graduates found jobs; to what extent they pursued additional education; whether they found work in areas related to their majors; and how satisfied they were with both the university and their undergraduate majors. Analysis of the survey of 1994 students focused on three major areas: (1) the general results of the survey, and where appropriate, a comparison to those in the prior surveys; (2) a breakdown by race; and (3) a breakdown by occupational categories. Results indicated that 80 percent of men and 75 percent of women found full-time employment within one year of graduation; that more than three-quarters of respondents found jobs related to their undergraduate majors; that the rates of full-time employment for Black and Hispanic respondents were higher than for White and Asian respondents; that nine out of 10 respondents felt positively about the undergraduate experience; that Black respondents were more likely to hold jobs in public and social service than other ethnic groups; and that women earned less than men, whether they worked full- or part-time. Figures and tables provide supporting detail. An appendix provides methodological detail.(CK)

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PUBLIC UNIVERSITY BACCALAUREATE FOLLOW-UP SURVEYS OF THE 1994 GRADUATES

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STATE OF ILLINOIS
BOARD OF HIGHER EDUCATION

PUBLIC UNIVERSITY BACCALAUREATE FOLLOW-UP SURVEYS OF THE 1994 GRADUATES

In September 1990, the Board of Higher Education updated its policy statements for undergraduate education and recommended the development and implementation of a public university Baccalaureate Follow-Up Survey. The Board's policies on Workforce Preparation also call for an assessment of the success of baccalaureate graduates in their transition to the world of work. The Baccalaureate Follow-Up surveys contribute to the statewide analysis of trends for program reviews, provide statewide data so that each public university can compare the responses of its own graduates to statewide results, and assist students in program selection and career planning. The survey is designed to answer four questions: 1) Do baccalaureate degree graduates find jobs? 2) To what extent do they pursue additional education? 3) Do they find work in areas related to their baccalaureate majors? and 4) How satisfied are they with both the university and their undergraduate majors?

The results of the first administration of this study from the Class of 1991 one year after graduation were presented in a report to the Board of Higher Education in July 1993, *Public University Baccalaureate Class of 1991 Follow-Up Survey*. Results of the next two survey administrations from the Class of 1988, five years after graduation, and the Class of 1984, ten years after graduation, were presented in September 1995, *Public University Baccalaureate Follow-Up Surveys of the 1984, 1988, and 1991 Graduates*. This year's survey of the Class of 1994, one year after graduation, reveals that:

- Eighty percent of men and 75 percent of women found full-time employment within one year of graduation. Seven percent of men and 12 percent of women were employed part-time. Only five percent of all respondents were unemployed and seeking work.

- More than three-quarters of respondents found jobs related to their undergraduate majors.

- The rates of full-time employment for Black and Hispanic respondents were higher than for White and Asian respondents. More Asian respondents were pursuing additional higher education and enrolled full-time. Whites reported the lowest rates of full-time and part-time enrollment in further education of any of the four groups.

- Nine out of ten respondents felt positively about the undergraduate experience. Positive attitudes toward respondents' undergraduate universities was slightly higher than toward their majors. Black and Hispanic respondents expressed higher levels of satisfaction with both the university and their majors than did White and Asian respondents.

- Black respondents were more likely to hold jobs in public and social service than other ethnic groups. A higher proportion of Asian graduates were employed in computer science and engineering compared to the other groups. Larger proportions of White respondents held jobs in sales and business, management, and finance than other groups. And, proportionally, slightly more Hispanic respondents held jobs in education.

- Women earned less than men, whether they worked full-time or part-time. Differences in earning power between men and women may be due in part to differences in the income ranges of the occupations men and women selected.

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The Baccalaureate Follow-Up Survey is similar to a survey conducted by community colleges and the Illinois Community College Board in which completers of selected occupational programs are surveyed about their employment placement and satisfaction with their program. The System is also one of three information systems developed by the Board of Higher Education and institutions that provide information about students. Other statewide systems include the High School Feedback System, which provides information to high schools about the college achievement of their graduates, and the Shared Enrollment and Graduation System, through which community colleges and public universities monitor the progress and persistence of their students. *Development of Student Information Systems* (September 1996) provides a status report on the enhancement of these systems.

General Results and Comparisons to Previous Surveys

This report marks the fourth year of the six-year pilot period of the Baccalaureate Follow-Up Survey. The first section of this report provides an analysis of the general results of the Class of 1994 one year after graduation, and where appropriate, compares these results to results of preceding administrations of this survey. For the first time in the four years of the pilot period of this study, the proportion of survey respondents by racial/ethnic category was roughly equivalent to the proportional representation by race and ethnicity of all graduates of public universities in 1994. Therefore, section two analyzes the results of respondents from the Class of 1994 by race. Section three provides an analysis of results by occupational categories. A detailed description of the development, methodology and limitations of this study was provided in Appendix A of last year's report, *Public University Baccalaureate Follow-Up Surveys of the 1984, 1988, and 1991 Graduates*. An update of methodology for the Class of 1994 survey is found in Appendix A of this report.

This is a pilot study and, as usual with pilot studies, conclusions are tentative. Each successive administration of this survey has become smoother, as participating universities refine the survey methodology and their data gathering techniques. The two main objectives of the pilot period continue to be met: to test the ability of the survey to answer the research questions and to make the survey administration more reliable with each iteration.

Employment

Table 1 shows that 80 percent of male and 75 percent of female respondents in the Class of 1994 were working full-time one year after graduation, with an overall full-time employment rate of 77 percent for all respondents. This percentage is lower than the results for the Class of 1988, five years after graduation, and the Class of 1984, ten years after graduation (87 percent and 83 percent full-time employed, respectively). For some graduates beginning their careers, it may take longer than one year to find employment.

Another explanation for the lower employment rates of graduates one year after graduation compared to cohorts who have been out of school longer is that a higher percentage of respondents in the Class of 1994 enrolled in further education right after completing the baccalaureate degree, thus delaying entry into the workforce. Further investigation of the results revealed that only three percent of all respondents in the Class of 1994 were unemployed, not enrolled in any further education, and still looking for work one year after graduation.

National data for 1991, the latest year for which we have information, indicate that 74 percent of the 1989-90 graduates were employed full-time one year after graduation (*Statistical Abstract of the United States 1995*, U.S. Bureau of the Census, September 1995). Although the comparison is three years old, the 77 percent full-time employment rate of 1994 Illinois public university graduates compares favorably with the national rate for that year.

Women in the Class of 1994 reported lower rates of full-time employment and higher rates of part-time employment than men, a result that is consistent with the results for the Classes of 1988

Table 1

EMPLOYMENT PATTERNS

	1994 Graduates One Year After Graduation			1988 Graduates Five Years After Graduation			1984 Graduates Ten Years After Graduation		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Current Employment Status									
Full-Time	80 %[1]	75 %	77 %	92 %	83 %	87 %	92 %	75 %	83 %
Part-Time	7	12	10	4	9	6	4	12	8
Not Employed, but Seeking	4	5	5	3	3	3	1	2	2
Not Employed, not Seeking	8	9	9	2	6	4	3	11	7
Primary Employer									
Self-Employed	5	5	5	6	5	6	11	10	10
Business	50	35	42	54	38	45	48	37	43
Professional Firm	10	6	8	12	7	9	10	7	8
College/University	5	5	5	4	5	5	4	6	5
Elementary/Secondary School	6	21	14	4	18	11	6	15	10
Health Agency	3	10	7	4	13	8	6	10	8
Government	9	6	8	9	8	8	10	8	9
Armed Services	6	1	3	3	1	2	3	1	2
Other	5	11	9	4	7	6	4	5	4
Place of Employment (all respondents)									
In Illinois	57	66	62	60	66	63	57	56	56
Urban Areas Bordering Illinois	4	3	3	5	4	5	4	4	4
Out-of-State	39	31	34	35	30	32	40	40	40
Place of Employment (full-time workers only)									
In Illinois	67	77	72	64	72	68	59	64	62
Urban Areas Bordering Illinois	4	4	4	5	5	5	4	5	4
Out-of-State	30	19	24	31	23	27	36	31	34
Relation of Current Job to Bachelor's Degree Major									
Closely related	45	49	48	44	49	47	44	48	46
Related	30	28	29	34	30	32	34	30	32
Unrelated by Choice	12	10	11	16	14	15	16	16	16
Unrelated Not by Choice	11	11	11	6	6	6	6	5	5
Unrelated (no further response)	1	1	1	1	1	1	1	1	1
Satisfaction with Current Job									
Very Satisifed	43	41	42	39	39	39	45	43	44
Satisifed	43	44	44	50	49	50	47	48	48
Dissatisfied	10	11	11	9	10	9	7	7	7
Very Dissatisfied	3	4	4	2	2	2	1	2	1
Average Annual Income									
All Respondents	$27,000	$22,000	$24,000	$35,000	$28,000	$31,000	$46,100	$35,000	$41,000
Full-Time Employed	28,000	23,000	25,000	36,000	29,000	32,000	48,000	37,500	43,000

[1]Due to rounding, column percentages may not add to 100.

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and 1984. The U.S. Bureau of Labor Statistics also reports lower civilian labor force and participation rates for women. In 1994, 93.2 percent of all male college graduates participated in the labor force, compared to 82.5 percent of all female college graduates (U.S. Bureau of Labor Statistics, unpublished data).

Table 1 shows that, in general, the primary employer is remarkably consistent across cohorts, with several exceptions. Fewer respondents in the Class of 1994 were self-employed than in the Class of 1984, ten years after graduation. Because approximately 80 percent of the respondents in the Class of 1994 were between 20 and 29 years of age, the lower self-employment rate is consistent with what we would expect for younger persons beginning their careers. More respondents in the Class of 1994 also indicated elementary/secondary schools as their primary employers (14 percent), compared to 11 percent of the Class of 1988, five years after graduation, and 10 percent of the Class of 1984, ten years after graduation. And more respondents in the Class of 1994 (nine percent) indicated Other as their primary employer, compared to six percent for respondents in the Class of 1988 and four percent of respondents in the Class of 1984.

Somewhat surprising are the results of the relationship of respondents' current jobs to their bachelor's degree majors. Table 1 shows that, while between 77 and 79 percent of all respondents in the three cohorts reported that their jobs were closely related or related to their majors, cohorts who had been out of school longer were more likely to choose jobs unrelated to their baccalaureate major. Fifteen percent of the Class of 1988 and 16 percent of the Class of 1984 reported that they were employed in jobs unrelated to their majors by choice, compared to 11 percent of the Class of 1994. A partial explanation may lie in the percentage of respondents in the older cohorts who earned additional degrees in areas unrelated to their undergraduate degrees or who advanced to management positions.

Not surprisingly, Table 1 shows that respondents one year beyond graduation earned lower salaries than did respondents five and ten years after graduation. The pattern of gender difference in earning power noted in the earlier surveys was also found in the results for the Class of 1994. Women earned less than men, whether they worked full-time or part-time. Some of the difference may be due to occupational choices, as discussed further below.

Overall, the majority of respondents in the Class of 1994 were quite satisfied with their jobs. Table 1 shows that 86 percent were very satisfied or satisfied with their current job. The level of satisfaction with employment is even higher, however, for respondents in the older cohorts. As mentioned in the September 1995 report to the Board, *Public University Baccalaureate Follow-Up Surveys of the 1984, 1988, and 1991 Graduates*, the management literature corroborates the fact that older workers express higher levels of job satisfaction than younger workers, often because of increased levels of responsibility and autonomy on the job.

Table 2 provides a breakdown of employment rates by baccalaureate degree major for the Class of 1994 respondents. Respondents in Education, Liberal Arts-Humanities, and Other[1] reported the highest percentage (six percent) of respondents who were unemployed but seeking work. Graduates in Business, Computer Science, Engineering Technology, and Nursing reported the lowest percentages of respondents who were seeking work. Because the latter undergraduate majors are all in professional fields in which degrees are designed to be directly linked to the world of work, it is not surprising that respondents reported high employment rates immediately following graduation. As presented in the September 1995 report to the Board, results from the Classes of 1988 and 1984 indicate that graduates in professional fields are more likely to enter the world of work immediately

[1]The following majors were coded as Other: Architecture; Personal and Miscellaneous Services; Home Economics; Library Science; Military Technologies; Parks, Recreation, Leisure and Fitness Studies; Protective Services; Public Administration; Transportation and Materials Moving.

Table 2

EMPLOYMENT AND FURTHER EDUCATION ANALYSIS BY MAJOR

Percent of Respondents Who, at One Year Post Graduation, Are . . .

Major	Employed . . . Full-time	Part-time	Unemployed, but . . . Seeking	Not seeking	Enrolled . . . Full-time	Part-time
All Majors	77 %	10 %	5 %	9 %[1]	17 %	13 %
Agriculture	78	9	4	9	16	9
Accounting	90	3	4	4	6	7
Business	89	4	3	4	6	9
Communication	82	9	4	5	12	10
Computer Science	89	5	2	4	8	14
Education	81	11	6	2	7	21
Engineering	78	5	5	12	25	9
Engineering Tech.	90	3	3	4	11	17
Nursing	79	20	0.5	0.5	4	14
Health	71	7	4	18	26	13
Liberal Arts-Humanities	74	13	6	8	18	17
Science-Math	54	14	5	27	46	12
Social Science	67	14	5	14	30	14
Fine and Performing Arts	70	17	4	9	15	11
Interdisciplinary	83	6	4	6	11	21
Other	77	10	6	7	16	11

Timing of First Job for Full-Time Employed Respondents	Held Job While Enrolled	By Graduation	Less than 1 month	1-3 Months	3-6 Months	6-9 Months	After 9 Months	Time not Reported
All Majors	17 %	26 %	11 %	21 %	13 %	7 %	5 %	1 %
Agriculture	18	43	8	13	11	4	3	0
Accounting	10	49	7	15	11	6	2	0
Business	16	30	10	21	12	7	4	0
Communication	7	22	14	26	18	7	4	0
Computer Science	17	48	6	14	9	4	1	1
Education	15	19	11	27	13	10	5	0
Engineering	7	42	9	19	14	4	5	0
Engineering Tech.	45	19	7	14	8	5	3	1
Nursing	25	32	7	20	10	3	2	1
Health	20	27	12	18	11	7	4	1
Liberal Arts-Humanities	33	16	9	16	13	8	5	1
Science-Math	11	22	12	24	18	7	6	1
Social Science	14	19	13	25	14	9	6	1
Fine and Performing Arts	12	10	18	24	18	11	7	0
Interdisciplinary	38	17	12	13	11	4	6	0
Other	16	23	13	19	16	7	7	0

[1]Due to rounding, percents may not add to 100.

after baccalaureate graduation, spending time in the workforce before they return for additional education, while students in liberal arts and sciences are more likely to continue with further education immediately after receiving the baccalaureate degree. The results of the Class of 1994 are consistent with this pattern.

The length of time it takes to find employment also varies by major. Forty-three percent of all full-time employed respondents either held the same job while still enrolled in their bachelor's degree program or found a job by the time they graduated. Table 2 shows that, in six out of 16 major fields, more than half of the respondents had secured employment by graduation: Agriculture, Accounting, Computer Science, Engineering Technology, Nursing, and Interdisciplinary Studies. In five more majors, (Business, Engineering, Health, and Liberal Arts-Humanities, and Other), almost half of the respondents had found employment by graduation.

Education

Table 3 shows that almost a third of the respondents in the Class of 1994 were pursuing additional education, either full-time or part-time. This percentage is higher than for the Class of 1988, five years after graduation, when slightly more than one quarter (26 percent) of respondents were enrolled either full- or part-time in additional education at the time of the survey. For the Class of 1984, ten years after graduation, the percentage had fallen to 13 percent.

Slightly more males were enrolled full-time (18 percent) than females (17 percent). Of those who were enrolled in additional education, more than half (52 percent) were pursuing master's degrees and almost a quarter (24 percent) were not pursuing any particular degree at all. Differences by gender were also apparent in the percentages of males and females pursuing various degree types. More women were pursuing academic master's degrees and degrees in the health professions. More men were enrolled in degree programs in medicine, theology/divinity, and law, as well as doctorates.

The type of additional degree program respondents were pursuing was strongly connected to their undergraduate major field. High proportions of those who had completed undergraduate majors in Agriculture, Education, and Engineering were enrolled in academic master's degree programs, while the highest percentage pursuing professional master's degrees reported undergraduate majors in Accounting, Business, Engineering Technology, and Interdisciplinary Studies. Additional investigation revealed that, of those who were pursuing degrees in Medicine, the overwhelming majority had completed undergraduate degrees in Math and Science. For those enrolled in additional degree programs in Law, however, the undergraduate major field varied considerably and included Accounting, Business, Communication, Humanities, and Social and Behavioral Science majors. Of those pursuing doctorates, the majority had completed undergraduate majors in Math and Science, with Engineering majors second.

Of the almost one-third of the Class of 1994 respondents who were pursuing further education, 95 percent felt that their baccalaureate majors had prepared them very well or adequately for further education.

Satisfaction

Satisfaction with the undergraduate experience is composed of two measures: satisfaction with the university and satisfaction with the bachelor's degree major. Table 4 shows that, in general, all three cohorts rated their undergraduate experience quite favorably, with between 92 and 96 percent expressing strongly positive or positive attitudes toward the university and between 90 and 91 percent reporting strongly positive or positive attitudes toward their bachelor's degree major. The results show a tendency for respondents who were further away from the undergraduate experience to rate the university a percentage point or two higher. Overall, respondents also expressed slightly more positive attitudes toward the university than toward the bachelor's degree major.

Table 3

FURTHER EDUCATION PATTERNS

Have you enrolled in a college or university since earning your bachelor's degree?

	Male	Female	Total
Yes, Full-time	18 %	17 %	17 %
Yes, Part-time	12	15	13

Are you pursuing (or have you completed) an additional degree since earning your bachelor's?[1]

	Male	Female	Total
Associate's	1 %	1 %	1 %
Second Bachelor's	4	4	4
Academic Master's	34	38	36
Professional Master's	17	16	16
Medicine	4	2	3
Health Profession	1	2	2
Theology/Divinity	1	0	0
Law	7	4	5
Doctorate	4	2	3
Other	4	6	5
No	23	24	24

How well did your baccalaureate major prepare you for further education?

	Male	Female	Total
Very Well	49 %	47 %	48 %
Adequately	46	48	47
Inadequately	5	5	5

If you are pursuing (or have completed) an additional degree, please indicate which degree:

Respondents' Major	Associate's	Second Bachelor's	Academic Master's	Professional Master's	Medicine	Health	Theology	Law	Doctorate	Other	No
Agriculture	3 %	4 %	45 %	12 %	1 %	1 %	%	1 %	%	12 %	20 %
Accounting	1	2	12	33		1		8	1	3	40
Business	2	4	11	29	1			7		4	40
Communication		5	38	12		1	1	9		8	26
Computer Science		2	43	17	4			2	2	2	28
Education	1	3	47	15		1			1	4	28
Engineering		4	66	6	1			3	6	2	12
Engineering Technology	3	4	32	23		1		2	1	3	31
Nursing		2	43	16						5	27
Health-Related		5	43	16	1	2				14	18
Liberal Arts/Humanities	2	4	39	16	1	1	1	8	2	5	22
Math/Science	1	6	29	3	19	10		2	10	10	10
Social/Behavioral Science	1	4	37	16	2	1		13	4	5	16
Fine and Performing Arts	4	6	34	21	1		2	2		5	26
Interdisciplinary	1	1	23	28	1	3	1	3		3	35
Other		3	29	23		1		5		5	34

[1]Due to rounding, percents may not add to 100.

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Table 4

SATISFACTION WITH THE UNDERGRADUATE EXPERIENCE

What is your present attitude toward the University?

	Strongly Positive			Positive			Negative			Strongly Negative		
	1994	1988	1984	1994	1988	1984	1994	1988	1984	1994	1988	1984
Employed Full-Time	30 %[1]	33 %	33 %	63 %	62 %	63 %	7 %	4 %	3 %	1 %	1 %	0 %
Employed Part-Time	26	27	31	64	63	64	9	9	4	1	2	1
Not Employed, but Seeking	23	29	28	61	62	63	13	7	7	3	2	2
Not Employed, not Seeking	33	35	34	61	59	63	5	5	3	1	1	1
All Respondents	30	33	33	62	62	63	7	5	4	1	1	1

What is your present attitude toward your bachelor's degree major?

	Strongly Positive			Positive			Negative			Strongly Negative		
	1994	1988	1984	1994	1988	1984	1994	1988	1984	1994	1988	1984
Employed Full-Time	36 %	31 %	31 %	56 %	59 %	61 %	8 %	8 %	7 %	1 %	1 %	0 %
Employed Part-Time	29	25	31	57	58	55	12	16	12	2	2	2
Not Employed, but Seeking	26	21	18	51	55	56	18	20	21	4	4	5
Not Employed, not Seeking	35	32	26	56	57	62	8	10	11	1	1	1
All Respondents	34	31	31	56	59	60	9	10	8	1	1	1

[1]Due to rounding, percentages may not add to 100 for each cohort across columns.

Not surprisingly, those who were employed full-time and those who were unemployed but not seeking work expressed the most positive attitudes toward the university, with between 93 and 97 percent of respondents in all three cohorts reporting strongly positive or positive attitudes toward the university. Between 90 and 92 percent of respondents who were employed full-time also rated their bachelor's degree major positively.

For those who were employed part-time, between 90 and 95 percent of all three cohorts expressed positive attitudes toward the university and between 83 and 86 percent reported strongly positive or positive attitudes toward their bachelor's degree majors. The decline in satisfaction with the bachelor's degree major between those who were employed full-time and those who were employed part-time may be indicative of a strong school-to-work connection expected by graduates.

Not surprisingly, those who were unemployed and seeking work expressed the lowest level of satisfaction with the undergraduate experience. For respondents in the Class of 1994 who were looking for work, 16 percent expressed negative or strongly negative attitudes toward the university. In comparison, only nine percent of respondents who were seeking work in the Classes of 1988 and 1984 held negative or strongly negative attitudes toward the university. Attitudes toward the bachelor's degree major for those seeking work were the least positive of all, with 22 percent of the respondents in the Class of 1994, 24 percent of the Class of 1988, and 26 percent of the Class of 1984 reporting negative or strongly negative attitudes toward their bachelor's degree majors.

The September 1995 report to the Board, *Public University Baccalaureate Follow-Up Surveys of the 1984, 1988, and 1991 Graduates*, noted that positive attitudes seemed to increase the farther away one is from the undergraduate experience. The results of this year's survey of the Class of 1994, viewed in combination with the results of the Class of 1988 and 1984, indicate that, while the trend may be true for attitudes toward the university, it may not be true for attitudes toward the bachelor's degree major. Students may expect a strong connection between their majors and full-time employment upon graduation and are disappointed when they do not find work, a disappointment that does not lessen the farther away one is from the undergraduate experience. Their disappointment, however, may center more upon their choice of majors than upon the university in general.

Similarities and Differences Among Racial/Ethnic Groups

Table 5 shows that, of the respondents in the Class of 1994, Black and Hispanic respondents reported the highest percentages of full-time employment one year after graduation, 81 and 80 percent respectively. Ninety percent of Black respondents were employed either full- or part-time and 39 percent were enrolled in further education, either full- or part-time. Of all respondents who were enrolled either full- or part-time in additional education, 19 percent of Black respondents were both working full-time and attending school full-time, compared to 14 percent for Asians and Whites and 16 percent for Hispanics. Further, Black respondents who were enrolled full-time reported the lowest percentage of any group that was unemployed and not seeking work (13 percent).

Almost a third (32 percent) of Hispanic respondents reported that they were enrolled in further education either full- or part-time within one year of baccalaureate graduation. Next to Black respondents, Hispanics reported the highest percentage who were both pursuing further education full-time and working full-time (16 percent). Twenty-eight percent of the Hispanic respondents who were enrolled in additional education were unemployed and not seeking work.

At 70 percent, Asian respondents reported the lowest full-time employment rate, but they also reported the highest rate of full-time enrollment in further education (24 percent), with more than a third enrolled either full- or part-time (35 percent). The lower percentage of full- and part-time employment for Asian respondents (78 percent) suggests that a greater percentage were pursuing further education full-time and not working. Further analysis revealed that 42 percent of Asian

Table 5

CLASS OF 1994 RESULTS REPORTED BY RACE/ETHNICITY[1]

Employed?	Black	Asian	White	Hispanic
Full-Time	81 %	70 %	77 %	80 %[2]
Part-Time	9	8	10	7
No, but seeking	5	6	5	3
No, and not seeking	5	16	8	10
Enrolled?				
Yes, full-time	18	24	17	18
Yes, part-time	21	11	13	14
No	61	65	70	68
Primary Employer for Full-Time Employed?				
Self-Employed	4	4	4	4
Business	30	49	46	35
Professional Firm	6	16	8	9
College/University	5	3	3	3
School	13	6	15	18
Health Agency	9	8	7	6
Government	15	5	8	10
Armed Services	7	4	3	6
Other	11	4	6	9
Job Relationship to Major for Full-Time Employed?				
Closely related	42	49	50	48
Related	32	31	29	32
Unrelated by choice	12	10	10	9
Unrelated not by choice	10	8	10	9
Just unrelated	5	2	1	2
Job Satisfaction for Full-Time Employed?				
Very Satisfied	32	52	44	53
Satisfied	54	37	43	37
Dissatisfied	11	9	10	7
Very Dissatisfied	3	2	3	3
Location of Employer for Full-Time Employed?				
In Illinois	74	73	72	74
Urban Areas Bordering Illinois	3	1	4	2
Out-of-State	23	27	24	24

Employed Full-Time and Enrolled Full-Time?	Black	Asian	White	Hispanic
Yes	19 %	14 %	14 %	16 %
Enrolled Full-Time and Unemployed and Not Seeking Work?				
Yes	13	42	25	28
Attitude toward University for All Respondents?				
Strongly positive	31	23	30	29
Positive	63	67	62	66
Negative	5	9	7	5
Strongly negative	1	1	1	1
Attitude toward Major for All Respondents?				
Strongly positive	40	23	35	38
Positive	54	62	55	56
Negative	6	14	9	6
Strongly negative	1	1	1	1

[1]Sample of Native American respondents too small to report.

respondents who were enrolled full-time also reported that they were unemployed and not seeking work.

White respondents reported lower full-time employment rates (77 percent) than did Black and Hispanic respondents. Also, full-time and part-time enrollment in further education was the lowest for White respondents of any of the groups. Additional investigation of the results revealed that 25 percent of White respondents who were enrolled full-time in school were unemployed and not seeking work.

The ability to attend school full-time and not work has implications for time-to-degree, stop-out and drop-out rates. It is easier to attempt and complete more credit hours and to finish degree programs faster when a student can attend school full-time and not have to work. Of respondents in the Class of 1994 who went back to school after earning their bachelor's degrees, approximately one in five Black respondents were both working full-time and enrolled full-time in additional education. For Hispanics, approximately one in six sustained full-time jobs and full-time education. For Whites and Asians, the ratio was approximately one in seven. Studies of time-to-degree need to consider the different employment and attendance patterns of students within each racial/ethnic group.

In the results reported for primary employer, several differences are noticeable among the four groups. Considerably more full-time employed Black respondents cited government as their primary employer (15 percent), compared to the other groups. Fewer full-time employed Black respondents listed business as their primary employer (30 percent), compared to 35 percent of Hispanic, 46 percent of White, and 49 percent of Asian respondents. Combining both business and professional firms, two thirds of Asians and approximately half of White respondents listed these as their primary employers, compared to 44 percent of Hispanic and roughly a third of Black respondents. Another difference is the considerably lower percentage of Asian respondents (six percent) who listed school as their primary employer, a percentage that is twice as low as the nearest other group. As discussed later, considerable variation exists in annual income one year after baccalaureate graduation depending upon the choice of occupation.

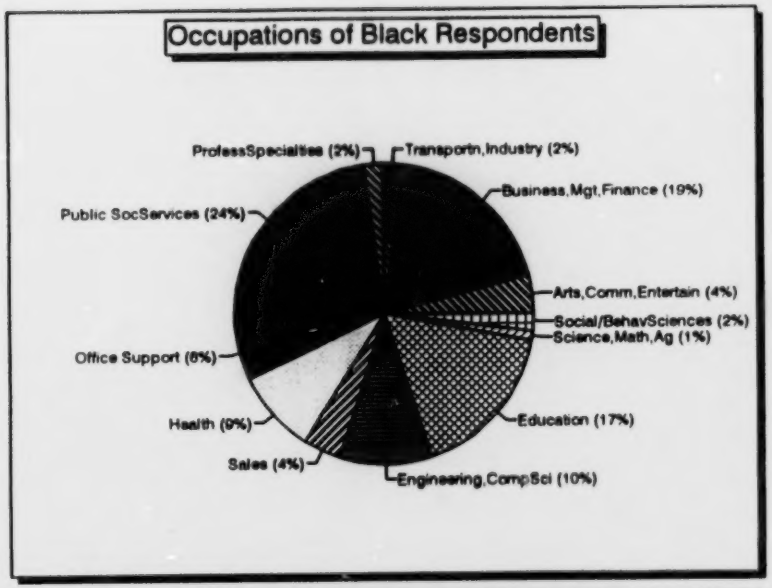
Additional evidence of the differences in the occupational choices for full-time employed respondents in each of the four racial/ethnic groups is shown in Figure 1. A higher percentage of Black respondents are employed full-time in the public and social service profession than are other groups. Hispanic respondents were more likely to list education as their top occupational choice compared to other groups. The top occupational choices of Asian respondents were engineering and computer science, clarifying the type of business or professional firm that two-thirds of Asian respondents listed as their full-time employer in Table 5. The greatest proportion of White respondents reported occupations in business, management and finance, followed by education. Almost twice as many White respondents reported sales as their occupational choice, compared to the other three groups, although sales occupations represented a relatively small proportion of all graduates.

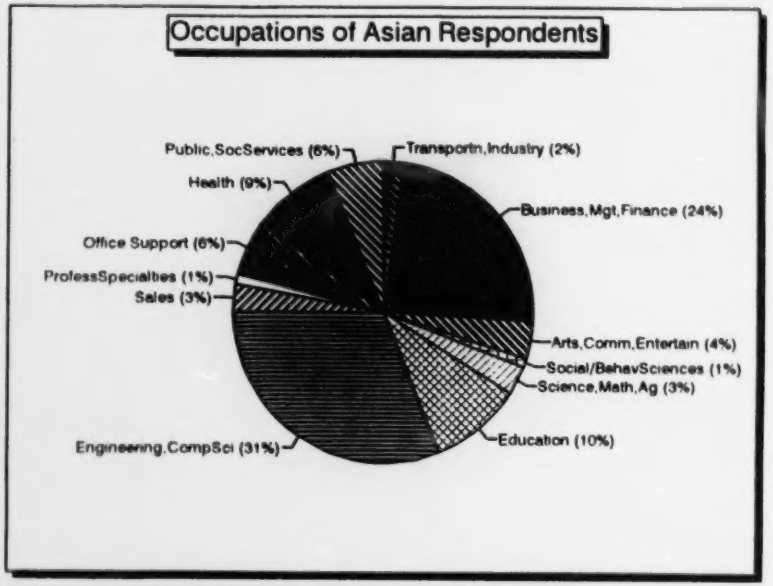
Table 5 shows that more full-time employed Asian, Hispanic, and White respondents reported a strong relationship between job and major than did Black respondents. Eighty percent of both Hispanic and Asian and 79 percent of White respondents reported that their jobs were closely related or related to their undergraduate majors, compared to 74 percent for Black respondents. While roughly equal percentages of respondents from all groups reported that they had no choice in accepting employment unrelated to their majors, slightly more Black respondents reported that their jobs were unrelated by choice to their majors.

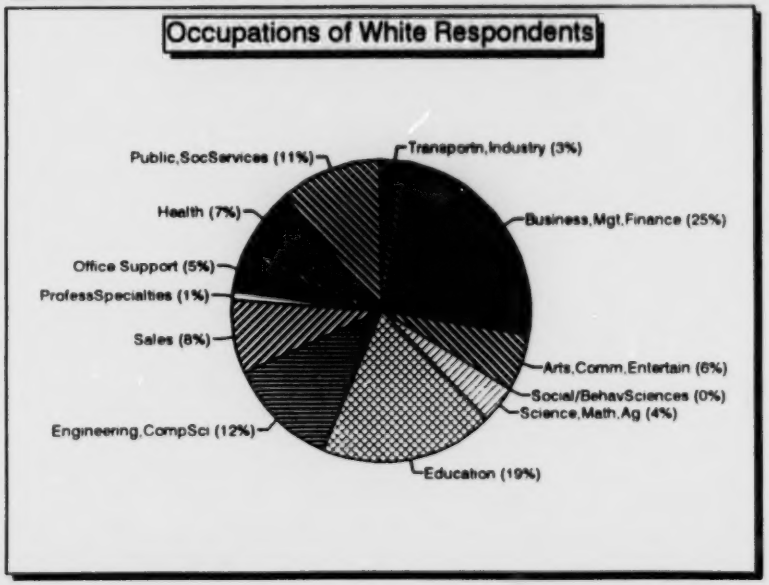
Full-time employed Hispanic respondents reported the highest level of job satisfaction, with 90 percent reporting that they were very satisfied or satisfied with their jobs, followed by 89 percent of Asian, 87 percent of White, and 86 percent of Black respondents.

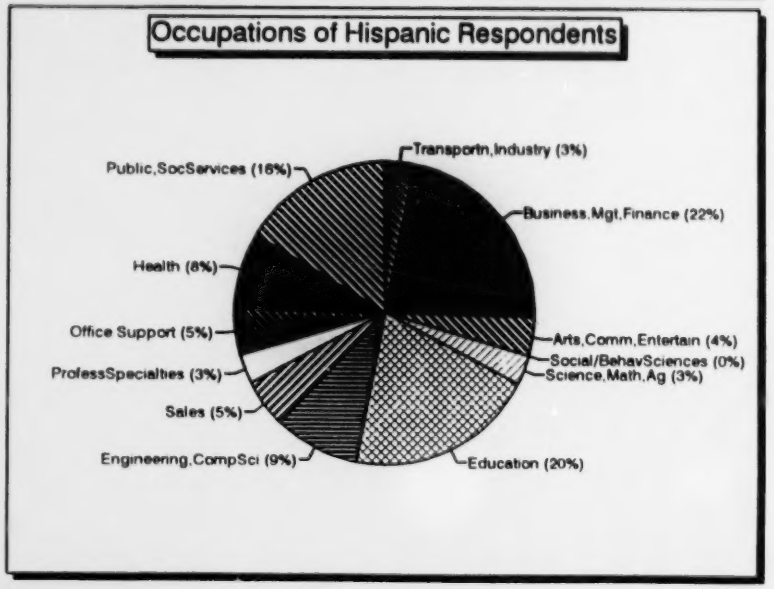
Figure 1

OCCUPATIONS FOR FULL-TIME EMPLOYED RESPONDENTS









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At least nine of ten respondents in each group rated the university from which they graduated positively. Hispanic and Black respondents reported the highest levels of approval of their home university, with 95 percent of Hispanic and 94 percent of Black respondents reporting that they held strongly positive or positive attitudes toward the university. Black and Hispanic respondents also reported the highest levels of satisfaction, (95 and 94 percent strongly positive or positive attitudes, respectively) toward their undergraduate majors. Ninety percent of White respondents and 85 percent of Asian respondents reported strongly positive or positive attitudes. It should be noted that the above results reporting satisfaction with the undergraduate experience are for public university *graduates* in the Class of 1994. Those students who drop out or have stopped out are not captured in this survey. While an assessment of the satisfaction of degree completers is important, these results are not meant as a comprehensive measure of campus climate or of the satisfaction of all minority students who enroll in public universities. The higher education literature is clear on the need to include non-persisters in any studies of campus climate. The Baccalaureate Follow-Up Study is not intended to address questions of climate.

Occupations and Baccalaureate Majors

Respondents to the Baccalaureate Follow-Up Survey were asked to indicate their primary occupation from a list of 109 specific occupations. These 109 occupations were grouped into 12 major occupational "clusters" or areas to enable easier synthesis of the information. To provide an indication of the specific types of jobs found within each of the 12 occupational clusters, Table 6 lists the most frequently mentioned occupations by major for full-time employed respondents of the Class of 1994.

For some undergraduate majors, occupations are quite clear. Ninety-percent of nursing majors reported that they were employed as registered nurses. For others, greater choice exists. For example, not all education majors become teachers. While education majors do usually teach and 64 percent of the education majors of the Class of 1994 did become teachers or teacher aides, the rest chose occupations in public and social service, health, and transportation and industry.

In Table 1, we saw a difference in median annual income of $28,000 for full-time employed males and $23,000 for full-time employed females. This difference in median income between men and women in the Class of 1994 is corroborated by the income ranges reported in Table 7, which provides a picture of the percentage of respondents within specific income ranges for each of the 12 occupational clusters.

Figure 2 below shows that, among full-time employed respondents, substantially higher percentages of women choose occupations in office support (85 percent female); education (80 percent); health (78 percent); social and behavioral sciences (64 percent); and arts, communication and entertainment (61 percent). More men were employed in engineering and computer science (78 percent male); transportation and industry (78 percent); science, math, and agriculture (61 percent); and sales (60 percent). Most of the occupations in which women predominate--office support; education; social and behavioral sciences; and arts, communication and entertainment--have higher percentages of respondents in the lower income brackets and fewer respondents in the higher income brackets. The reverse is true for the occupations of engineering and computer science; transportation and industry; science, math, and agriculture; and sales, in which men are the majority. Higher annual incomes were also reported by respondents in business, management, and finance, occupations where the proportion of women in the Class of 1994 equalled that of men. The only occupational cluster in which women predominated and in which income ranges were higher was health.

These reports were corroborated in previous surveys. As reported in the September 1995 report to the Board, the results for the Classes of 1988 and 1984 revealed that women in some occupations

Table 6
Most Frequently Cited Occupations by Major for Full-Time Employed Respondents

Major	Frequently Cited Occupations	Major	Frequently Cited Occupations
Agriculture and Natural Resources	Farm owner, manager (13%) Other sales (7%) Retail/wholesale salesperson (7%) Agricultural/food scientist (6%)	Health Professions	Other health (15%) Physical therapist (10%) Medical lab technician/technologist (10%) Occupational therapist (8%) Medical records technician (5%) Armed forces (5%)
Accounting	Accountant, auditor (81%) Other business, mgt., finance (4%) Financial analyst/manager (3%)	Nursing	Registered nurse (99%)
Business	Other business, mgt., finance (17%) Accountant, auditor (9%) Financial analyst, manager (6%) Computer programmer, systems analyst (6%) Marketing/public relations mgr. (6%) Office manager, supervisor (5%)	Liberal Arts-Humanities	Secondary, vocational teacher (8%) Other business, mgt., finance (6%) Other sales (5%) Office manager, supervisor (4%) Other arts, communication, entertainment (4%) Marketing/public relations mgr. (3%) Other office support (3%)
Communication	Advertising agent, copywriter (11%) Radio/TV broadcaster, technician (9%) Journalist, editor, reporter (9%) Other sales (8%) Other arts, communication, entertainment (8%) Marketing/public relations mgr. (8%)	Science and Mathematics	Physical scientist (chemist, physicist, etc.) (17%) Secondary, vocational teacher (14%) Life scientist (biologist, zoologist, etc.) (10%) Other science, math, agriculture (9%) Other health (5%)
Computer Science	Computer programmer/systems analyst (82%) Other engineering and computer science (3%)	Social/Behavioral Sciences	Social worker, case worker (13%) Other business, mgt., finance (7%) Other public and social service (5%) Secondary, vocational teacher (4%) Retail/wholesale person (4%)
Education	Pre-school, elementary teacher (35%) Special education teacher (15%) Secondary, vocational teacher (12%) Other education (5%) Armed forces (5%) Teacher aide (4%)	Visual/Performing Arts	Designer (29%) Other arts, communication, entertainment (8%) Artist, author, composer (7%) Other education (6%)
Engineering	Engineer (70%) Computer programmer, systems analyst (8%)	Multi/Interdisciplinary Studies	Technician/technologist (10%) Computer programmer, systems analyst (10%)
Engineering Technology	Engineer (24%) Technician/technologist (16%) Armed forces (11%) Other engineering, computer science (10%) Industrial, production manager (8%)	Other	Social worker, case worker (16%) Police officer, guard, fed. agent (10%) Other business, mgt., finance (6%) Other public and social service (6%) Restaurant/hotel resort manager (5%) Architect, landscape architect (4%)

Table 7

ANNUAL INCOME RANGES BY OCCUPATION FOR THE CLASS OF 1994
FULL-TIME EMPLOYED, ONE YEAR AFTER GRADUATION

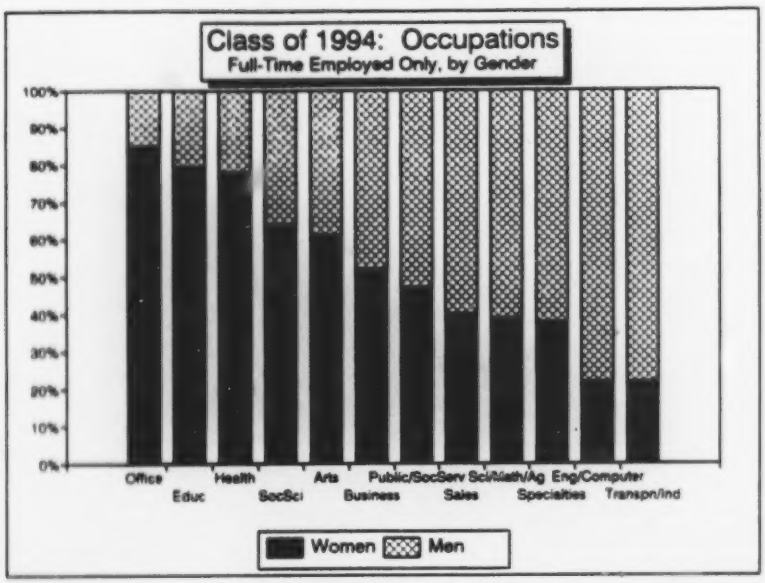
Percent of full-time employed respondents who reported annual income within the following ranges . . .

Income	Arts, Comm., Entertainment	Business, Mgt., Finance	Education	Engineering Computer Sci.	Health	Office Support
Under $2,500	0 %	0 %	0 %	0 %	0 %	0 %
$ 2,500 - 7,499	2	0	2	0	1	1
$ 7,500 - 12,499	7	2	7	1	3	11
$12,500 - 17,499	20	9	10	2	7	27
$17,500 - 22,499	37	21	34	5	17	40
$22,500 - 27,499	17	28	32	15	22	16
$27,500 - 32,499	11	24	11	28	22	4
$32,500 - 37,499	1	7	2	27	14	1
$37,500 - 42,499	2	3	1	12	7	0
$42,500 - 47,499	1	1	0	3	2	0
$47,500 - 54,999	0	1	1	3	2	0
$55,000 - 64,999	0	1	0	1	1	0
$65,000 - 85,000	0	1	0	1	1	0
Over $85,000	0	0	0	0	0	0

Income	Profess'l. Specialties	Public, Social Service	Sales	Science, Math, Ag.	Social, Behav. Sci.	Tranportn., Industry
Under $2,500	0 %	0 %	0 %	0 %	[1] %	1 %
$ 2,500 - 7,499	5	1	1	2		2
$ 7,500 - 12,499	5	2	6	7		9
$12,500 - 17,499	12	10	7	8		12
$17,500 - 22,499	28	31	18	24		19
$22,500 - 27,499	23	23	27	25		17
$27,500 - 32,499	8	13	21	20		11
$32,500 - 37,499	6	8	9	6		12
$37,500 - 42,499	7	5	6	5		6
$42,500 - 47,499	1	3	2	1		3
$47,500 - 54,999	4	2	1	2		4
$55,000 - 64,999	1	1	1	0		3
$65,000 - 85,000	1	1	1	0		1
Over $85,000	0	0	0	0		0

[1]Number of respondents too small to report.

Figure 2



earned more than men, such as the health professions and engineering technology. Occupational choice is a factor to be considered in the differences in earning power between men and women.

Summary and Next Steps

A major purpose of the Baccalaureate Follow-Up Study is to serve as a tool for individual campuses to improve undergraduate education. Noteworthy results from this year's study include the fact that most graduates either found jobs or enrolled in further education. The 77 percent full-time employment rate for respondents in the Class of 1994 compares favorably with the latest national information we have, which indicates 74 percent full-time employment for U.S. graduates one year after baccalaureate graduation. Only three percent of the respondents in the Class of 1994 reported that they were unemployed, not enrolled in any further education, and still seeking work one year after graduation. Graduates in business, management, and finance and engineering and computer science reported the highest percentage of full-time employment. Graduates in Professional Specialties and in Social and Behavioral Sciences reported the lowest percentage of full-time employment, although many of these graduates continued with further education rather than entering the workforce.

More than three-quarters of graduates found jobs related to their undergraduate majors. Interesting to note are the considerably higher levels of dissatisfaction with the undergraduate major reported by graduates who were unable to find jobs. And the results of the last three years of this pilot survey indicate that the percent of respondents who were dissatisfied with their majors increased for those who had been out of college longer and were unemployed and seeking work.

Some of the differences in average income between males and females can be accounted for in their choices of occupations. The results for the Class of 1994 showed that women predominated in fields where income ranges were lower, such as Office Support, Education, Social and Behavioral Sciences, and Arts, Communication, and Entertainment. Health was the only occupation in which income ranges tended to be higher and in which the majority of full-time employed respondents were women.

For the respondents in the Class of 1994, half or more of the graduates in 11 out of 16 major fields either held the same jobs or had secured full-time employment by the time they graduated. In fields like Education or Fine and Performing Arts, however, more respondents took longer to find full-time employment.

Respondents in the Class of 1994 were generally quite satisfied with their undergraduate experience, giving high marks to their home universities. Of those who continued with education after graduation, 95 percent felt that their bachelor's degree had prepared them well or adequately for further education.

These results highlight the importance of advising during the course of students' undergraduate experiences, especially in the choice of a major. Information from the 32,734 surveys of baccalaureate graduates from the Classes of 1994, 1988, 1984, indicate that those students who are unemployed and seeking work, whether one year or ten years beyond graduation, are more dissatisfied with their undergraduate majors than either employed respondents or respondents who are not seeking work. The results of these surveys can provide information to students on the length of time it takes to find employment and the salary ranges within particular occupations for different majors. While the time it takes to find employment and the average income of graduates in a particular major are not the only factors in the choice of a major, information provided to students early enough in their undergraduate careers can assist them to make appropriate career choices and to develop job search strategies.

This coming year will mark the fifth year of the six-year pilot period for the Baccalaureate Follow-Up Study. The Class of 1991, five years after graduation, will be surveyed. The Baccalaureate Follow-Up Work Group, composed of representatives for each public university, met in April 1996 and decided to meet twice a year to better monitor the methodology and results of the survey. The group has identified the following areas of continuing attention: improvement of response rates, especially for minority graduates; review of the currency of occupational classifications; investigation of alternate ways to report income; and campus use of survey results. Individual Work Group members are also piloting two questions to measure the extent of student perception of underemployment compared to actual underemployment, and the proportion of respondents who may be employed "full-time, but temporarily." Results from the campus pilots of these two questions can target problems and suggest whether changes to the statewide survey form are worthwhile. Further consideration will also be given to questions that address students' academic experience and the quality of the undergraduate experience as a whole.

Although the Baccalaureate Follow-Up Survey is still a pilot study, Work Group members report that the results are beginning to be useful for campus program review and planning. The two main objectives of the pilot period continue to be met: The survey results do answer the research questions and the survey is becoming more reliable with each iteration.

Appendix A

Methodological Considerations

For the first time in the four years of the six-year pilot period for the Baccalaureate Follow-Up Survey, enough graduates in each racial/ethnic category in the Class of 1994 returned surveys to enable an analysis of results to be conducted by race. For the three previous years of the study, analyses of results were not conducted by racial or ethnic group because Blacks were underrepresented and White students were overrepresented when compared to their respective representation among degree recipients for the whole cohort. For the Class of 1994, however, the percentage of survey respondents in each racial/ethnic group reflected fairly well the proportion of all Illinois public university graduates by race/ethnicity. Table A-1 below provides response rates by race/ethnicity for all four years of this pilot study. While Black and Hispanic survey respondents still remain somewhat underrepresented compared to the proportion of all Black and Hispanic who graduated from Illinois public universities in 1994, their representation is approximate enough to allow investigation of the results by race/ethnicity.

Table A-2 provides a breakdown of response rates by gender for all four years of this pilot study. Survey response rates by gender approximate quite well the proportion of male and female graduates for all Illinois public university baccalaureate graduates in 1991 and 1988. Results for 1984 yielded an overrepresentation of males and for 1994, an overrepresentation of females. No analyses are presented in this report that break down results by gender *and* race (for example, employment rates of Hispanic females), since the percentages in the sub-groups become too small to be valid.

Table A-1

RESPONSE RATES BY RACE/ETHNICITY

	Race/Ethnicity													
	Black, Non-Hispanic		Asian/ Pacific Islander		White, Non-Hispanic		Native American/ Alaskan		Hispanic		Non-resident Alien		Unknown	
	Survey	All[2]	Survey	All	Survey	All	Survey	All	Survey	All	Survey	All	Survey	All
1991	3.5 %	7.3 %	4.3 %	4.6 %	86.7 %	82.1 %	0.2 %	0.3 %	2.5 %	3.0 %	0.2 %	1.7 %	0.0 %	1.1 %
1988	3.9	6.9	2.6	3.8	88.7	83.6	0.3	0.2	1.5	2.5	0.2	1.9	2.8	1.1
1984	4.3	6.6	2.2	2.9	84.6	85.5	0.4	0.2	1.1	2.0	0.3	2.4	7.1	0.3
1994	6.0	8.0	4.0	4.9	82.5	79.9	0.2	0.2	2.6	3.4	0.4	2.4	4.3	1.1

Table A-2

RESPONSE RATES BY GENDER

	Gender			
	Female		Male	
	Survey[1]	All[2]	Survey	All
1991	54.4 %	53.3 %	45.6 %	46.7 %
1988	52.8	51.5	47.2	48.5
1984	47.4	50.3	52.6	49.7
1994	54.6	50.6	45.0	49.4

[1]Reported by calendar year.
[2]Reported by fiscal year. Source: *Data Book on Illinois Higher Education*, 1994.